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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,631	11/09/2001	Moo-Jong Lim	8733.532.00	5940
30827	7590	07/25/2005	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			TRAN, HENRY N	
1900 K STREET, NW			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	

2674

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,631

Applicant(s)

LIM ET AL.

Examiner

Henry N. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-17 and 23-26 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 18 is/are rejected.
- 7) ☒ Claim(s) 19-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The Amendment received May 9, 2005 have been thoroughly considered; and this Office action is in response thereto.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshihara et al (U.S. Patent No. 6,115,016, hereinafter referred to as “Yoshihara ‘016”).

Yoshihara ‘016 teaches a field sequential liquid crystal display device and methods for driving said display device, which comprises: a liquid crystal display (LCD) panel 21 having an upper substrate 2, a lower substrate 4, and a liquid crystal display layer 13 there between; a back light 22 comprising a LED array 7 of different color R, G and B light sources disposed directly under and at a down edge of the LCD and in a repeated sequence of Red, Green, and Blue LEDs as illustrated in figures 1, 2 and 6; and means, which is an image signal processor, comprising a data processor 31 and a back light controlling means 35 for turning on the light sources LEDs in four sub-periods corresponding to four sub-frames in synchronism with the luminance value obtained with a luminance value defined by the pixel data PD provided by the data processor 31

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for controlling a lighting speed, which defines by controlling each of the R, G and B light sources, which are the R, G, and B LEDs, for emitting red, green, and blue lights during the first to fourth sub-frames; wherein, the R, G, and B LEDs are serially or sequentially turned on for emitting red, green, blue lights in a first, a second, and a third sub-frame periods; and a combination of light sources, R, G and B are turned on for emitting light of a stressed color corresponding to at least one of the light source in a fourth sub-frame period by driving a fourth light source, which is a combination of at least one of the color light sources, using a synchronous signal SYN read from the processor 31 that provided pixel data PD that indicates a stressed color for the fourth sub-frame period; wherein, the liquid crystal layer is a Ferroelectric Liquid Crystal (FLC) or an Optical Compensated Birefringent, which is an antiferroelectric liquid crystal; and one frame period is 1/60 second about 16.6 ms; each sub-frame is shorter 1/240 seconds; see figures 1, 2, 4, 5 and 6; col. 4, line 64 to col. 5, line 64; col. 8, line 6 to col. 9, line 6. Claims 1-11 and 23-26 are therefore rejected.

4. Claim 18 is rejected under 35 U.S.C. 102(e) as being anticipated by Yoshihara et al (U.S. Patent No. 6,828,954, hereinafter referred to as "Yoshihara '954").

Yoshihara '954 teaches a method of color image display for a field sequential liquid crystal display device including an image signal processor 31, comprises: dividing a liquid crystal panel into n numbers of driving area, e.g., four display areas: 221, 222, 223, and 224; turning on each of light sources Red, Green and Blue LEDs of the back light 22 sequentially for every divided driving area; and providing a time interval between driving sections of a previous light source and a next light source; see FIGS. 4, 9 and 10.

Allowable Subject Matter

5. Claims 8-17 and 23-26 are allowed.
6. Claims 19-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-11 and 18-26 have been considered but are moot in view of the new ground(s) of rejection.

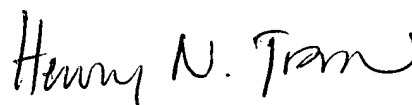
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It's U.S. Patent No. 6,392,620 issued to Mizutani, which teaches a display apparatus and methods for a field sequential liquid crystal display with back light control technique.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry N. Tran whose telephone number is 571-272-7760. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The new fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Henry N. Tran". The signature is written in a cursive, flowing style.

Henry N Tran
Primary Examiner
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7/21/05